

A FURTHER CONTRIBUTION TO OUR KNOWLEDGE OF THE GENUS
CHLORITIS, WITH DESCRIPTIONS OF ELEVEN NEW SPECIES.

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PLATE XXI.

AN interesting collection of shells from Australia and the Solomon Islands, sent over by Dr. J. C. Cox, was received by Mr. J. H. Ponsonby on the eve of his departure for an extended tour to the Far East, and has been placed in my hands for examination. This collection contains, besides a number of interesting specimens of known forms, no less than eight new species of *Chloritis*. A new species of this genus from New Guinea has also been submitted to me for description by Mr. Ponsonby. Moreover, my own collection has contributed two others, both received from the collection of the late Mr. C. E. Beddome; these were accompanied by labels bearing Mr. Brazier's manuscript names and marked "ex auct." I have adopted these names, as no doubt the shells, so labelled, exist in other collections. At the same time, however, I enter a protest against the bestowal of manuscript names, which gives rise to confusion and is an ill service to science.

I take this opportunity of referring to the opinion expressed by the late Mr. Ancey¹ that *Chloritis Malangensis*, Bullen, described as from Java,² is probably identical with *Moellendorffia eucharistus*, Pilsbry, from Loo Choo. Mr. Bullen has obligingly allowed me to inspect his types of *C. Malangensis*, and on comparing them with Pilsbry's species I find that they are certainly identical. *C. Malangensis* must therefore be reduced to a synonym of *Moellendorffia eucharistus*, and, as the locality Java is almost certainly erroneous, this habitat must be deleted. The mistake arose most probably, as already suggested by Mr. Ancey, through Mr. Rouyer, from whom Mr. Bullen's shells were received.

Among the shells sent over by Dr. Cox the following call for remark:—

1. A sinistral specimen of *C. eustoma* from the Solomon Islands.
2. A dead and worn specimen of the very rare *C. Beatricis*, from British New Guinea. I have seen only one other, which is in the collection of Colonel Beddome.
3. A large elevated form of *C. quercina*, measuring: diam. maj. 37, min. 31 mm.; alt. 33 mm.

Hab.—Shortland Island, Solomon Islands.

¹ Journ. de Conchyl., vol. liv (1906), p. 128.

² Proc. Malac. Soc., vol. vi (1905), p. 192, pl. xi, fig. 2.

4. *C. quercina*, var. *Hombroni*, from Florida Island. An extraordinary pyramidal form, the last three whorls planate above, flattened below, obtusely keeled, the keel exerted in all but the last $\frac{2}{3}$ whorl. Suture superficial. Diam. maj. 37.5, min. 32 mm.; alt. 24 mm.

Both the type and the variety are represented by bipartite specimens, with the upper side ochreous-brown, the lower straw-yellow.

5. *C. Challengeri*, Byron Bay, New South Wales. A new habitat. One other specimen is labelled Clarence and Richmond Rivers.

6. *C. Novocambria*, an elevated form, labelled "Scrubs 8 miles from the North Pine River, Queensland." A new habitat, the type being described from New South Wales. Diam. maj. 15, min. 12.5 mm.; alt. 11.5 mm. A second specimen measures: diam. maj. 12, min. 10 mm.; alt. 8.5 mm.

In my former paper, on p. 116, the references to *C. Marimberti* and *C. Balansai*, var. *cineta*, have by a printer's error unfortunately been transposed in the footnotes Nos. 2 and 3.

DESCRIPTIONS OF NEW SPECIES.

CHLORITIS CONOMPHALA, n.sp. Pl. XXI, Figs. 1, a-d.

Shell widely umbilicated, depressed globose, distinctly and regularly striated, pale ochreous, the last whorl pale fulvous, covered with sparse hair-scars arranged in quincunx. Spire low, subplanate, apex immersed, suture deep. Whorls $4\frac{1}{2}$, convex, increasing regularly, the last somewhat suddenly, slowly descending and shortly deflexed in front, a little dilated at the mouth, obtusely angulated round the funnel-shaped umbilicus, which shows the entire penultimate whorl within. Aperture subcircular, little oblique, the margins convergent, united by a thin callus, peristome rosy-fulvous, thickened, shortly expanded and reflexed; upper margin arcuate, outer and basal rounded, columellar slightly dilated above, impinging upon the umbilicus. Major diam. 21.5, min. 17.5 mm.; alt. 14 mm.

Hab.—Rubiana, Solomon Islands.

Type in Dr. Cox's collection. Allied to *C. discordialis*, but smaller and with the hair-scars much more sparsely placed; the peristome is less expanded, the last whorl less dilated, and the aperture consequently smaller; the last whorl also descends less, and the umbilicus is not so widely excavated. A second specimen measures: major diam. 20, min. 16.5 mm.; alt. 12.5 mm.

CHLORITIS MUNDA, n.sp. Pl. XXI, Figs. 2, a-d.

Shell moderately umbilicated, discoid, dull, dark cinnamon brown, finely irregularly striated, the nepionic $1\frac{1}{2}$ whorls minutely granulated; covered with distant small warty tubercles (probably bearing hairs when fresh) arranged in quincunx. Spire planate, apex almost immersed, suture deep. Whorls $4\frac{1}{2}$, convex, increasing regularly, the last rather suddenly, a little dilated towards the mouth, very slightly descending in front, slightly compressed below, and obtusely angulated round the slightly excavated umbilicus. Aperture ovate-lunate, oblique, margins convergent; peristome thin, fulvous, upper and outer

margins almost straight, the basal slightly reflexed, columellar triangularly dilated above and slightly overhanging the umbilicus. Diam. maj. 12·5, min. 11·25 mm.; alt. 7·75 mm.

Hab.—Moon Creek, Burnett River watershed, Queensland.

Type in Dr. Cox's collection. At first I considered this to be *C. spinei*, but that species appears to have a wider umbilicus and more tumid whorls. A second specimen is immature, having only three whorls completed. The warty tubercles probably bear hairs or bristles when the shell is in fresh condition.

CHLORITIS LANUGINOSA, n.sp. Pl. XXI, Figs. 3, *a-d*.

Shell narrowly umbilicated, depressed turbinate, dull corneous, finely striated, with microscopic spirals under a densely, shortly pilose cuticle, giving the shell a velvety appearance. Spire conoid, apex prominent, suture rather deep. Whorls 4½, convex, increasing regularly, the last a little widened and but slightly constricted behind the peristome, shortly deflexed in front, obscurely angulated round the narrow umbilicus. Aperture subovate, oblique, margins convergent, united by a thin callus; peristome thin, slightly expanded, not reflexed; margins evenly rounded, columellar triangularly dilated above and reflexed over the umbilicus. Diam. maj. 11, min. 9·5 mm.; alt. 7·5 mm.

Hab.—Eidsvold, Queensland.

Type in Dr. Cox's collection. This new species can only be compared to *C. brevipila*, but the whorls are less globose than in that species, the spire is more elevated, the last whorl descends less in front, and the conspicuous bristles of *C. brevipila* are here absent; the margins of the peristome are also more distant. Under a very strong lens the quincuncial arrangement of the pili can with difficulty be detected on the earlier whorls, but on the last it is imperceptible.

CHLORITIS EXILIS, n.sp. Pl. XXI, Figs. 4, *a-d*.

Shell umbilicate, turbinate, very finely and regularly striated, dull, pale corneous, densely covered with minute soft, short, pale bristles arranged in quincunx. Spire conoid, apex obtuse, suture rather deep. Whorls 5, convex, increasing rapidly, last dilated towards the mouth, slightly descending in front, obtusely angulated round the narrow umbilicus. Aperture suboval, oblique, margins convergent; peristome white, scarcely thickened and narrowly reflexed, margins evenly rounded, columellar triangularly dilated and less than half covering the umbilicus. Diam. maj. 18, min. 15 mm.; alt. 13·5 mm.

Hab.—Mount Dryander, Port Denison, Queensland.

Type in Dr. Cox's collection. From *C. Coxeni*, its nearest ally, this new species is distinguished by its smaller size, the less covered umbilicus, and the densely crowded, finer, shorter, and paler bristles.

From *C. Bennetti*, another ally, it differs in the narrower umbilicus, and, although larger, in having one whorl less. A second specimen of this new species is paler, and possesses half a whorl less than the type. A third from Warroo, Port Curtis, is a little more elevated in the spire, measuring alt. 15 mm.

CHLORITIS COGNATA, n.sp. Pl. XXI, Figs. 5, *a-d*.

Shell moderately umbilicate, globose turbinate, finely regularly striated, whitish corneous, covered with crowded hair-scars arranged in quincunx. Spire conoid, apex obtuse, suture deep, almost channelled. Whorls nearly 5, convex, increasing regularly, the last rather suddenly, shortly deflexed in front, widening towards the mouth and slightly constricted behind the peristome, subangulated round the slightly excavated umbilicus. Aperture subovate, oblique, margins approaching; peristome white, a little thickened, and reflexed; upper margin arcuate, outer and basal rounded, columellar triangularly dilated above and a little overhanging the umbilicus. Diam. maj. 14.5, min. 12 mm.; alt. 10 mm.

Hab.—Olsen's Caves, Rockhampton, Queensland.

Type in Dr. Cox's collection. Somewhat similar in shape to *C. exilis*, but more depressed and with the hair-scars less crowded; the margins of the peristome are more approaching, and the umbilicus is a little wider and more excavated.

CHLORITIS MICROMPHALA, n.sp. Pl. XXI, Figs. 6, *a-d*.

Shell narrowly umbilicate, globosely turbinate, finely irregularly striated and decussated with wavy incised spirals, dark corneous above, paler beneath. Spire conical, apex obtuse, suture deep. Whorls 4, globose, increasing rapidly, the last dilated towards the mouth, descending suddenly and deeply in front, obscurely angulated round the narrow deep umbilicus. Aperture suboval, oblique, margins approaching, united by a thin callus; peristome white, a little thickened and reflexed, margins evenly rounded, columellar margin broadly triangularly dilated, more than half covering the umbilicus. Diam. maj. 21.5, min. 18 mm.; alt. 17 mm.

Hab.—Barrier Range, North-West Australia.

Type in Dr. Cox's collection. The only species to be compared with *C. micromphala* is *C. Blackmani*, but the globose whorls, the broader base, the more dilated last whorl, the more approximate margins of the peristome, and the absence of hair-scars at once separate the new species from its ally; the more broadly dilated columellar margin of the peristome and the more covered umbilicus are also differentiating characters.

CHLORITIS POOREI, n.sp. Pl. XXI, Figs. 7, *a-d*.

Shell moderately umbilicate, globose, thin, pale ochreous, a little shining, irregularly striated, very densely covered with minute hair-scars arranged in quincunx. Spire conical, apex obtuse, suture channelled. Whorls $4\frac{1}{2}$, increasing regularly, tumid, shouldered near the suture, somewhat compressed at the periphery, obtusely angulated round the deep umbilicus, which is slightly excavated; last whorl slightly dilated towards the mouth, scarcely descending in front. Aperture subcircular, oblique, margins convergent; peristome pale fulvous, thin, a little expanded; margins evenly rounded, columellar triangularly dilated and reflexed, covering half the umbilicus. Diam. maj. 12.5, min. 10.5 mm.; alt. 9.5 mm.

Hab.—Cardwell, Queensland.

Type in my collection. This species and the next two, together with *C. Blackmani*, are closely associated on account of the excessively crowded and minute hair-scars, this character varying in an inverse ratio to the size of the shell. *C. Poorei* is distinguished from *C. Blackmani* and *C. Thales* by the narrower umbilicus and the deeper suture.

CHLORITIS THALES, n.sp. Pl. XXI, Figs. 8, *a-d*.

Shell narrowly umbilicate, globose, thin, translucent, corneous, a little shining, irregularly striated, very densely covered with excessively minute hair-points arranged in quincunx. Spire conoid, apex obtuse, suture deep. Whorls 5, convex, obtusely angulated near the suture and round the narrow umbilicus, rounded at the periphery and below, increasing regularly, the last rapidly, slightly dilated towards the mouth, and a little descending in front. Aperture sub-circular, oblique, margins convergent; peristome thin, corneous, slightly expanded; margins evenly rounded, columellar margin triangularly dilated and reflexed, more than half covering the umbilicus. Diam. maj. 14·5, min. 12·5 mm.; alt. 12 mm.

Hab.—Rockingham Bay, Queensland. Somewhat like a small *C. Blackmani*, but with narrower umbilicus; the whorls are more tumid, flattened near the suture; the hair-scars in *C. Blackmani* are still more crowded than in the present species

CHLORITIS MISELLA, n.sp. Pl. XXI, Figs. 9, *a-d*.

Shell moderately umbilicate, depressed conoid, thin, pale corneous, finely plicate-striate, densely covered with rather large hair-scars arranged in quincunx. Spire low conical, apex obtuse, suture channelled. Whorls 4, convex, increasing regularly, the last rather suddenly, widened towards the mouth and constricted behind the peristome, slightly compressed below and subangulated round the excavated umbilicus, shortly deflexed in front. Aperture subovate, oblique, margins approaching; peristome thin, scarcely reflexed, margins evenly rounded, columellar slightly dilated and impinging upon the umbilicus. Diam. maj. 8·5, min. 7 mm.; alt. 5·5 mm.

Hab.—Queensland.

Type in Dr Cox's collection. The smallest member of the group, and allied to *C. Poorei*, but much smaller and much more depressed; it somewhat resembles *C. Buxtoni* in shape.

CHLORITIS OBNUBILA, n.sp. Pl. XXI, Figs. 10, *a-d*.

Shell narrowly umbilicate, turbinate depressed, dull ochreous-corneous, finely plicate-striate, with microscopical wrinkled spirals under a deciduous velvety cuticle. Spire conoid, apex granulate obtuse, suture rather shallow. Whorls 5, convex, increasing regularly, the last rather suddenly, obscurely angulated above the periphery, a little widened towards the mouth, scarcely constricted behind the peristome, very shortly deflexed in front, slightly compressed below, and obscurely angulated round the narrow

umbilicus. Aperture ovate-lunate, oblique, margins convergent; peristome thin, whitish, slightly reflexed, margins evenly rounded, columellar triangularly dilated and slightly overhanging the umbilicus. Diam. maj. 18, min. 15.5 mm.; alt. 12 mm.

Hab.—Australia.

Type in Dr. Cox's collection. In shape it resembles *C. mucida*, but it is smaller and has a slightly narrower umbilicus, while the aperture is less dilated transversely. No trace of hair-sears can be detected, although the periostracum is quite fresh.

CHLORITIS ÆTNAENSIS, n.sp. Pl. XXI, Figs. 11, *a-d*.

Shell imperforate, depressed conoid, dull, dark corneous, very finely and regularly striated, covered with very minute and crowded short bristles. Spire much depressed, apex low, suture rather shallow. Whorls 4, increasing regularly, the last rather suddenly, the earlier ones a little convex, the last compressed above, obtusely angulated above the periphery, compressed below, becoming inflated towards the mouth and slightly constricted behind the peristome, obtusely angulated round the very small umbilical depression. Aperture subelliptic, little oblique, margins approaching, united by a thin callus; peristome whitish, becoming fulvous at the edge, a little thickened, expanded and reflexed; upper margin ascending at first, then slightly curved, outer rounded, basal nearly straight, columellar obliquely ascending, triangularly dilated and reflexed, entirely covering the umbilicus. Diam. maj. 13, min. 11 mm.; alt. 8 mm.

Hab.—Etna Bay, Dutch New Guinea.

Type in Mr. Ponsonby's collection. *C. Ætneensis* differs from *C. telitecta* in the completely covered umbilicus, the more depressed spire, and in having the aperture more contracted laterally. From *C. eurychasma* it may be distinguished by its smaller size, the compressed whorls, the supra-peripheral angulation, the less oblique and more contracted aperture; the last whorl is also more dilated and constricted, and descends less in front; the columellar margin is less dilated, and the bristles are finer and more crowded.
